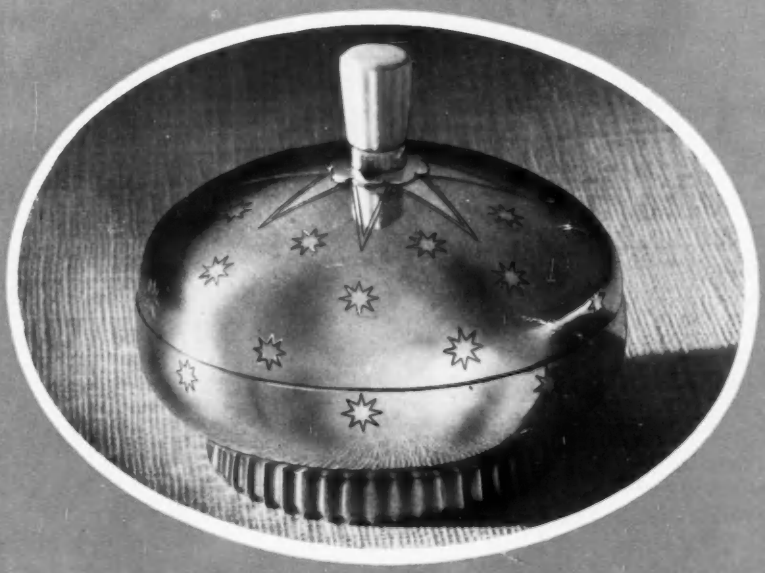
arch
OCT 8 1951
ALABAMA
POLYTECHNIC INSTITUTE

DESIGN

A monthly journal for manufacturers and designers

THE SCHOOL OF ARCHITECTURE AND ALLIED ARTS



IN THIS ISSUE

The art schools and industrial design

Textures in contemporary design

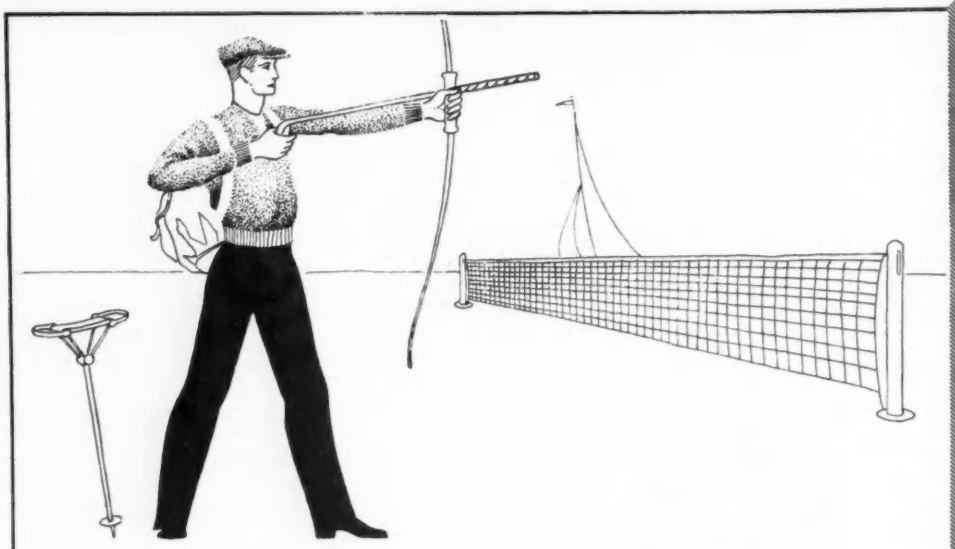
Development of the electron microscope

Design afloat

COUNCIL OF INDUSTRIAL DESIGN

NUMBER 20 : AUGUST 1950

PRICE TWO SHILLINGS



DO SPORTSMEN TALK T.I.?

Do sportsmen talk? Fishermen are silent till the King's Arms opens; archers and golfers frown at so much as a hiccup; javelin-throwers just grunt; pole-vaulters gasp; motor-racers mutter; and you can't chat on skis with the wind in your teeth. On the other hand, squash and tennis players often keep up a stream of encouraging noises; the brotherhood of the rucksack greet Wordsworth's daffodils; small-boat specialists use terrible nautical words; while shooting-stick sitters are natural natterers.

Have we lost track of T.I.? Not on your life. *Every single sport mentioned here owes some of its keenest equipment to T.I.* enterprise.

The letters T.I. stand for Tube Investments Ltd., of The Adelphi, London, W.C.2 (Trafalgar 5633). They also stand for the thirty producing companies of the T.I. Group, whose specialist skills are co-ordinated in the general field of light engineering.

THE SURNAME OF A THOUSAND THINGS

DESIGN

A monthly journal for manufacturers and designers

ISSUED BY THE COUNCIL OF INDUSTRIAL DESIGN AND THE SCOTTISH COMMITTEE OF THE COUNCIL

NUMBER 20 : AUGUST 1950

TEXTURES IN CONTEMPORARY DESIGN *Dennis Young* 4
THE ART SCHOOLS *H. McG. Dunnett* 8
FRESH IDEAS IN FOREIGN GLASS 14
DESIGN AFLOAT (Boats from the 1951 Stock List) 16
FROM LABORATORY TO PRODUCTION LINE 18
NEW BOOKS 22
DESIGN OVERSEAS (Changes in German taste) 25
LETTERS TO THE EDITOR 27
INDUSTRIAL DESIGN ABSTRACTS 29
NOTEBOOK 31

Cover illustration : engraved copper powder bowl inlaid with silver, designed and made by J. H. S. Astill, first-year student at the Birmingham College of Art and Crafts : see p 8

EDITOR: Alec Davis EDITORIAL OFFICES: Tilbury House, Petty France, London SW1 Whitehall 6322

A HALLMARK FOR GOOD DESIGN?

"OF COURSE, *we* know what you mean by 'contemporary,'" said the Enlightened Furniture Retailer, "but none of our customers do—they just ask for 'modern' and that is what they want," and he pointed across his showroom towards the glossy sideboards-cum-cocktail-cabinets which were drawn up in martial splendour along the back wall. In the foreground, also ranged in close ordered ranks, were the upholstered members of this same Gin-and-French tradition, sleek and slanting and as corpulent as their destined owners.

This shop, of course, catered for "a good class of customer," but similar delusions of grandeur impel the purchase of furniture, lampshades, women's clothes or what you will throughout a very large section of the buying public. Value for money must be seen to be believed; and that closes the door in many industries to the hidden virtues of fine workmanship, while opening the door to all manner of mayonnaise and mascara.

Yet because the factors and fabricators of "borax" are nimble folk, it is odds on that they already have one nostril to the wind, scenting the trail of the pathfinders whom they currently ridicule or abuse. No one should complain of this, least of all the propagandists for better design, who must welcome their allies wherever they find them.

But if one can learn anything from history, one should beware of veneer-deep conversions and facile assimilations of new ideas. The path of the jerry-builder has been paved with half-baked, half-digested cribs of the work of better times or better men. From the plywood parody of a Tudor beam to the angled window in a concrete wall, the jerry-builder has always got it wrong. He seizes on a flat roof and a horizontal window and thinks he has grasped all that Le Corbusier has to teach. It was the same with carpets and textiles before the war. Because a Marion Dorn or a Ben Nicholson could work wonders with a small repertoire of simple shapes, the smart boys had a go with them too.

It will be the same with contemporary furniture and indeed with contemporary design in whatever field, once it is seen that public taste is looking that way. Just as Picasso's broad back was at one time a bandwagon for a host of second-raters, the renascent elegance and courtesy of contemporary furnishings will be cribbed and debased as soon as the time is ripe.

This problem is as old as art itself. The copyist has always shadowed the artist, but in earlier times, when even the imitator had his standards of craftsmanship and when his customers too were discriminating, the declension was slower. Quality of

continued overleaf

materials and workmanship was maintained even though design may have slipped.

Things move faster today. A generation which can swing Mozart or render the national anthem in bebop will give short shrift to the contemporary designer once he strikes the jack-pot. Who, then, will guide the innocent shopper into the paths of righteousness? How will the Oxford Street ramblers—the floating vote of taste, as Sir Kenneth Clark calls them—know the good from the bad once all things are sold as contemporary?

Perhaps the Council of Industrial Design is taking its fences before it comes to them in raising these questions. There is still a world of difference between the *moderne* and the contemporary and there is still the old dragon of the pseudo-antique to be slain, but the day may be nearer than we think when the battle will be, not between different styles or periods, but between good and bad within the same idiom.

In the world of letters, guidance is given by book-wrappers marking the approbation of independent selection committees and no one has complained of dictatorship of taste on the part of the book critics, because they do not attempt to say what shall be published, but only what they think very well worth reading. Would there be the same acquiescence were this hall-marking practice to be extended to other trades? Would it be of equal value to the customer, would it be a service to the retailer and the manufacturer, or would it be regarded as an unwarrantable interference with private enterprise?

DESIGN invites the views of its readers on these crucial questions. P. R.

Quality and quantity

THE STEADY STREAM of reports issued by the Anglo-American Council on Productivity has aroused widespread comment. In *The Observer* of 9 July, C. F. Dunn summarised the general conclusions of the reports published up to that date. "The teams agree that American industrial superiority is not due solely to America's vast material advantages, or to any technical secrets," he wrote. "It springs from what the British builders call in their Report 'the general outlook and spirit of American industry'." It would be wrong to assume that large doses of American example could cure all the ailments of British industry.

American mass-production methods are hardly appropriate to the makers of, say, Staffordshire bone china, Yorkshire woollen cloth, Walsall leather goods, or London-tailored men's wear. These and many other British industries depend for their existence on our tradition for quality, which has never existed in the same form in America because there has never been an aristocratic background to set such standards—but always an insatiable demand for goods, so that speed of production became the first priority in American industry.

The Productivity Teams' reports (as paraphrased by Mr Dunn) comment that the Americans "are realists about quality; nobody puts a shine on parts which will be working out of sight." This attitude may help to speed-up mass production, but its widespread adoption in British industry would do more harm than good to our industrial reputation.

Design and the holidaymaker

THE GOVERNMENT'S PLAN for financial aid to hotels which attract dollar-spending visitors, recently announced, will no doubt provide an opportunity for them to show common sense and good taste in their re-equipment.

Even more important, in the long run, is the indirect stimulus which such a plan may give to the British hotel industry generally. Far too many hotels in this country have lost the homely charm of the country inn without attaining the standards of comfort and sophistication associated with a Grand Hotel. Their dreariness makes them a deterrent to travel at home, when with a little imagination they could be made into a positive attraction. They must be held partly responsible for the increasing number of English people who in recent years have made a habit of spending their holidays on the Continent.

Though there are brilliant exceptions, it is probably true to say that most provincial hotels have failed to keep pace both with contemporary style and with contemporary needs—with what are accepted elsewhere as the essentials of modern urban life. Even in seaside and holiday resorts, hotels often show this lack of *design* in the widest sense of the word. In the current guide-book of a small coastal resort, the town's newest hotel, built only a few years before the war, proudly advertises: "30 BEDROOMS; 3 BATHROOMS." Design for 1950? Perhaps: but hardly creditable for Britain's Festival year, 1951. A. D.

St Barbara, shown here, was the first British ocean racing yacht with a light-alloy mast—some 25 per cent lighter than a hollow spruce spar. Other yachts and motor boats from the 1950 Stock List are illustrated on p 16

TEXTURES ARE IMPORTANT

in contemporary design

Neglected by designers of the 1930's in their desire to make a complete break with the past, surface texture is now recognised again as an important factor in design—no less important with new materials and methods of production than with the old

By Dennis Young, ARCA

IN THE GENERAL reaction of the 1930's against the over-decoration and elaborate styles that had become established during the nineteenth century, surface textures were smoothed down and became more uniform. Of great influence was the work of the German *Bauhaus*, through its policy of considering design in terms of industrial production. Although its students were encouraged to produce studies in textures, the application of their knowledge in this field was not evident in the *Bauhaus* designs which went into production—except for textiles and wallpapers. No doubt this deficiency would have been rectified in time, had conditions permitted: but the influence of the "unfinished" work was profound, affecting designers throughout the world in their approach to design problems—and the smooth sterile surfaces characteristic of interior decoration in the 'thirties were the outcome.

A slight swing away from this uniformity of surface was noticeable in some of the Scandinavian pavilions at the Paris Exhibition of 1937. The textures used in the Finnish and Polish displays—in contrast with the French displays—were natural and indigenous to their country. This love of *natural* textures had, of

Nineteenth-century interiors were so overcrowded with ornaments and heavy furniture that surface textures, which were good in themselves, were brought into conflict; confusion resulted

In the early 1930's, *interior designers reduced surface textures to a minimum as part of their efforts to break completely with the past*

Pleasant natural textures, resulting from the use of natural materials, can be found in old cottages in many parts of the country

In the hands of a competent designer, a combination of natural and man-made textures can give grace and beauty

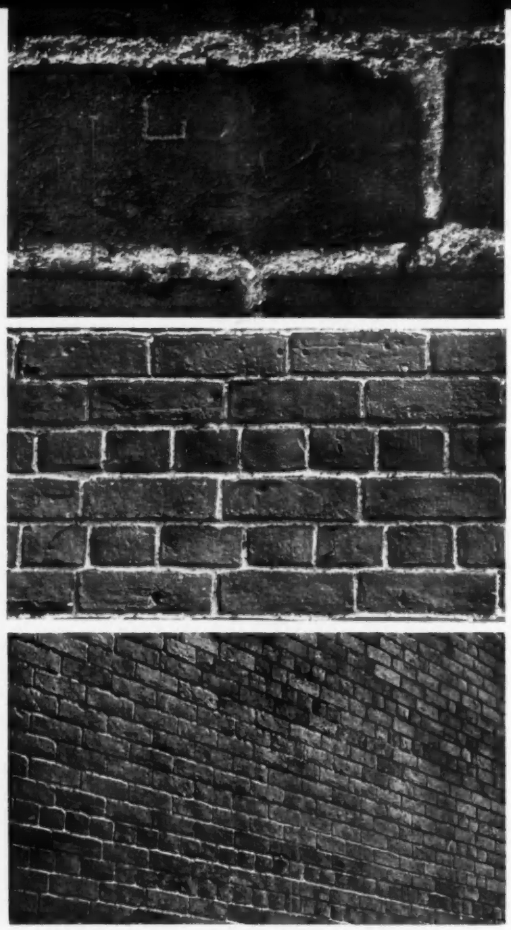
course, been very strong at the beginning of the century, especially in the work of Ernest Gimson, who understood so well how to use local materials for cottage architecture and furniture.

Generally speaking, however, in recent years the importance of surface texture has tended to be overlooked, or rather texture has been considered as the last of the qualities to look for in design. This is partly due to the fact that the design of a product is too often judged by its photograph, rather than the object itself. The industrial designer of today relies so much on photographs to keep abreast of current trends that his visual senses are becoming divorced from his tactile senses. For this reason, the photographs which accompany this article are less compelling than the showing of actual examples of textures would be.

Surface textures may be divided into two groups; those with a two-dimensional character with no tactile qualities except smoothness, and those of three dimensions. The word "smoothness" is admittedly rather vague, unless its meaning in this context is more clearly qualified: but most designers will agree that, beyond a certain point, the degree of smoothness ceases to be tactile and becomes visual. This can be proved by testing one's own tactile awareness by laying a variety of smooth surfaces such as polished wood, metal, stone and plate-glass on a table, and trying to *feel* the differences of surface, with one's eyes shut.

The *two-dimensional texture* gains its effect from the way in which the surface appearance is broken up by varying colours and tones. Textures are closely related to pattern, pattern becoming texture when the individual motif or motifs merge and one becomes more conscious of the all-over effect. Texture is thus relative to the surface on which it appears and the distance from which it is viewed. For example, a brick wall seen from a distance of 9 inches shows the texture of brick and mortar; from 6 feet, one is more conscious of the pattern made by the bricks and the

continued overleaf



A combination of texture and pattern on one surface, such as brickwork, gives an effect which changes according to the distance from which it is viewed

TEXTURES ARE IMPORTANT

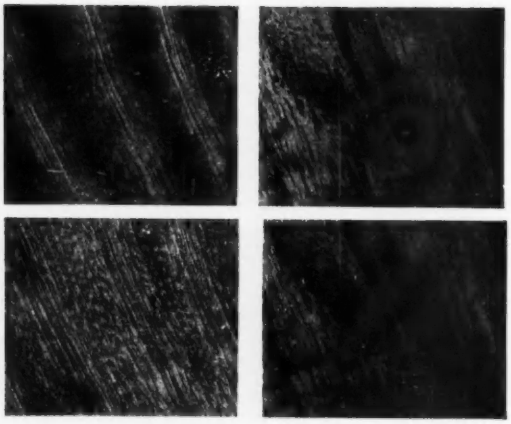
continued

joints; from 60 feet, the all-over effect is most noticeable.

Often a two-dimensional texture gives a three-dimensional effect, the most obvious example being polished wood, the surface of which consists of a transparent film, which has a smooth tactile quality, yet allows light to shine *through*, into the pores and grain of the wood; the light and shade of the wood varying according to the position of the light source. On the other hand, if an imitation wood grain is printed, giving an *illusion* of grain and pores, there can be no interesting variation in effect, no matter where the light source is: the life and quality of wood is lost. Which suggests that it is much better to develop an abstract pattern than to try to imitate wood.

Three-dimensional textures include all those with definite tactile qualities which respond to variations in light-source. They may be natural or man-made, organic or inorganic. The possibilities and delights of natural textures are more widely realised than those of designed surface textures, and there is therefore more need to give attention to the latter.

The right use of texture is a matter both of aesthetics and of function. In furniture design, consideration is always given to proportion, timbers to be used, relationship of the handle to the rest of the piece; yet little thought is given to polishing, beyond whether a matt or high finish should be used. A variety of



Left: mahogany-veneered Formica, shown with light falling on it from two positions 90° apart. Right: a printed imitation of wood, lit from the same positions. The real wood responds to the change in lighting; the imitation is almost unchanged

Furniture design involves not only good proportion and correct placing of handles but also the balancing of textures—as in the chest above. Designed by Frederick Gibberd, FRIBA, FSIA. *Photo from* English Furniture, *by John Gloag (A. & C. Black)*

effects can be obtained from choice of timbers, from contrasting degrees of polish, and from the combination of painted and clear polished wood. The chest shown on p 6 is in mahogany and white wood cellulosed, and is an interesting example of how painted and natural finished wood can be combined in one piece of furniture without loss of harmony. Some wood and metal furniture of the early 1930's has identical tactile qualities for the two materials, and makes an interesting comparison with Danish designs in which the particular qualities of each material are brought out in its texture, contrasting textures setting-off each other.

A functional use of texture is shown in the bathroom door-knob illustrated on this page. It is in teak, and will not slip when gripped with a soapy hand.

Eighteenth-century cast-iron fire grates make an interesting parallel with plastic mouldings of today, for both rely on a mould for their shape. Unless skilfully used, cast iron can be either dull or garish, for of itself it has neither a pleasant nor an interesting surface texture; and the same is true of moulded plastics. For this reason, the Murphy radio set illustrated has been given a three-dimensional reeded texture similar to that of an eighteenth-century grate.

Although this article suggests that designers should reassess the value of surface texture and give it a greater importance than has recently been common, it would be regrettable if they were to swing to the opposite extreme, giving us "textures, textures everywhere, and not a place to think." The use of texture in industrial design should be controlled by reason, not swayed by fashion.

Some objects are pleasant to hold, others have a "dead" feeling. Bathroom fittings are usually in the latter category. The door-knob of teak, above, can be turned with a wet hand

The use of reeding in antique furniture is widely appreciated. This contemporary desk by Heal's (designer A. J. Milne, MSIA) provides an example of an otherwise dull end-elevation brightened by the use of concave reeding

Iron casting and plastic moulding both involve the problem of producing surfaces that are not dull, yet are easy to clean and pleasant to use. In the examples above, reeding has provided the answer

THE ART SCHOOLS . . .

are they doing a good job for industry?

A survey of industrial design training facilities: *by H. McG. Dunnett* *

DURING THE LAST 20 years or so, many proposals have been made for improving the training of industrial designers. There have lately been signs that some of these proposals are becoming actuality, and this is an appropriate time to consider the present position of design training.

The latest Ministry of Education statistics show that of all full-time students in art establishments, over half are studying architecture, commercial and advertising art, or are training to be teachers. If the figures for vocational part-time and evening students are added, they show an even more marked concentration in those groups and in other classes which fall outside the category of "industrial designer."

Where, then, does the training of industrial designers fit into the picture?

There are two different kinds of industrial designer, one who specialises in designing for a particular industry, and the other who designs for a variety of industries. The craft side of the art schools has specialised in training designers of the first type, almost exclusively for industries such as furniture, textiles, pottery, glass, jewellery and silversmithing, which have established traditions of craftsmanship. For these industries, there emerges from the schools a supply of designers which numerically is more than adequate.

There is a fairly consistent demand from such craft-based industries, and from advertising and publishing groups, for artists and designers. Those who run such undertakings are to some extent dependent on them: the essential nature of their services is today scarcely questioned. It is largely because of this fact that the art schools train students for the industries concerned. It is a matter of supply and demand: this is apparent from the different subjects that different art schools teach; their curricula are influenced very largely by the requirements of industries in the localities they serve.

It is apparently accepted by the educational authorities—if not by all industries—that the job of training designers for industry shall continue to be a responsibility of the schools of art and crafts in collaboration with the technical colleges, as it has been in the past, and it is essential that the system shall include in its scope forms of training suitable for a profession that is not only expanding but growing more diverse.

The system, as it exists today, can be summarised in the following way. In the first place, the administration of the schools is the responsibility of the local authority, except for the few that are attached to a university or are privately owned. The Ministry of Education exercises powers of supervision and inspection through His Majesty's Inspector, who is always ready to help and advise, but the organisation of the curriculum and the appointment of staff is a local responsibility. Usually there is a sub-committee of the local authority's main education committee whose job it is to control the destinies of the art school. Whether its members are more or less go-ahead de-

---

* A former Secretary of the Design and Industries Association, Mr Dunnett has carried out research into design problems in England, Europe and the USA. He has also written extensively on design, mainly in the architectural press.

Textiles designed by students of the LCC Central School of Arts and Crafts, shown in a recent exhibition at the Rayon Design Centre (DESIGN No 18, p 2). *Left, screen-printed rayon by Margaret Cooper; centre, screen-printed linen by Terence Couran; right, woven jacquard by Elaine Chapman*

Two more designs by LCC Central School students: above, a single-colour screen print (in magenta, on cotton) by Robert Addington . . .

. . . and a jacquard design in yellow silk by Elaine Chapman. D. Whitehead Ltd, of Rawtenstall, Lancs, have bought this design

From Guildford School of Art and Crafts: a reminder of the close relationship between design and craftsmanship in dressmaking

pends on a number of factors, among them the influence of the director of education and of the principal of the art school, but finally the responsibility rests, of course, upon the local electorate.

The curriculum is divided into full-time courses, for those who have left schools of general education and want to take up artistic careers; day release classes for students employed in trades where part-time study is an accepted part of trade training; other part-time day classes where some art training is part of a course; and lastly evening classes which are taken for a variety of reasons. There are over 200 art establishments in England and Wales, divided into Art Colleges, Art Schools and Art Classes. They vary in size from large Colleges in a few important manufacturing centres to small Art Classes, scattered throughout the country and frequently catering for part-time and evening students only. Most art schools provide instruction in several branches of craft work such as lettering, hand-weaving or fabric printing by hand, pottery, bookbinding or carving in stone or wood; many in addition provide for the designer for advertising and illustration and for the needs of local manufacturing industries, such as textiles in Bradford and Manchester, silversmithing and metalwork in Birmingham, furniture at High Wycombe and pottery at Stoke-on-Trent. A few colleges and schools of art are equipped for production by machine methods; Leicester College of Art is outstanding in its woodworking machinery and its machine-tools for metalworking.

At present, training of entrants for the craft-based industries and the graphic arts, together with the training of future teachers of art—mainly for secondary schools—absorbs almost the whole of the art-school effort. This leaves unsolved the problem of the all-round industrial designer, which is increasing in importance; it leaves unsatisfied a very large section of industry which is slowly beginning to use the services of this type of designer.

Does this amount to a censure of the art schools and the education system? The subject is too involved for a snap judgment: there are a number of cross-currents that require identification and some explanation before one can begin to assess the pros and cons of the case.

It is true that a number of our practising industrial designers have branched out into designing for a variety of industries after being trained to design for a craft-based industry, but it is also true that some have entered the profession trained as architects, as sculptors or as engineering draughtsmen without an art-school training at all.

Two assemblies of unit furniture in English walnut designed at the Leicester College of Art as prototypes for machine production. The feet are slot-screwed and are removable. Units comprise chest, cupboards, shelves, filing cabinet and bureau

Is the art and crafts school suitable for training all-round designers? The bigger art schools can certainly provide the first essentials of an industrial design training, but the more advanced craft-based instruction—for example, in textile design or in design for the printing industry—is too specialised to be suitable training for other industries. It is difficult to see how the normal type of art school can be expected to equip itself for the purpose.

Somehow, somewhere, the student who wishes to become a *general* industrial designer has to acquire an insight into the scope and practice of the basic mechanical processes; he has to master mechanical drawing, pick up enough knowledge of industrial organisation and marketing problems to enable him to hold his own in discussion with specialists in those branches; and provide himself with a working knowledge of a variety of materials and finishes. No one can expect a school of any kind to cram all this into a student by the age of, say, 20. In other words, no student can at present expect to be more than semi-equipped as an industrial designer of this kind when he leaves the shelter of his art-school training, for the variety of materials, processes, techniques which will face him is beyond the scope of the school.

If industries that are not craft-based were to exert a demand for young industrial designers on any scale, this drawback could be overcome; a scheme of training could be evolved which combined the theory of the

Door handle by Colin Cobill and table lamp by Robert Heritage (Birmingham College of Art and Crafts)

Desk and armchair in Indian laurel by G. Padiak; standard lamp in aluminium tube and mahogany by G. Dabrowski (LCC Central School of Arts and Crafts)

Photograph, courtesy *Wood*

Demountable sideboard which can be packed flat for transport: designed and made by students at the Beckenham School of Art

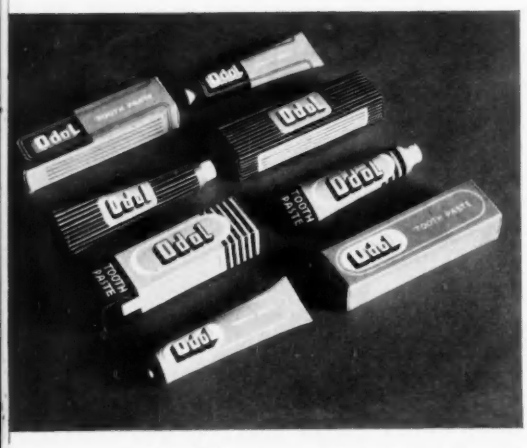
Coffee table in walnut and sycamore with glass top, designed and made by Rosemary Cox at the LCC Central School

school with the practical experience of the assembly line and the drawing office. One major difficulty would be that the industries that can usefully employ industrial designers are so diverse, and so scattered, that they cannot co-operate as a body for the purpose. Something could be done by the engineering industries pressing for the inclusion of an aesthetic element in draughtsmen's training; but this could never be more than a small part of the answer. It would require action at a national level, *e.g.*, by the Federation of British Industries, to establish a wider system throughout the country. Such a process would, moreover, take too long; the circumstances are very different from those which affect the training of specialist designers for craft-based industries.

To summarise: we must choose between two courses. We can wait until the demand operates—*i.e.*, until industry one day finds itself short of designers, only to learn that the education authorities cannot produce them overnight. Alternatively, the education authorities can demonstrate, with the aid of those manufacturers who already use industrial designers as a matter of course, that their specialist knowledge is a valuable commercial asset. Clearly the second alternative is the course to follow. It could well be put into effect by establishing pilot schemes in a very limited number of centres where the most favourable conditions exist. There is need for considerable experiment, and certain art schools have already made commendable progress towards removing their greatest handicap—lack of facilities for combining art training with technical knowledge—generally by co-operating with technical colleges; the LCC Central School of Arts and Crafts, the Birmingham College of Arts and Crafts and the Leicester College of Art and Crafts have made particularly rewarding efforts. Without decrying the work being done elsewhere, it is suggested that efforts at this level might well be concentrated in those centres until more is known of the methods and equipment most appropriate to the purpose.

The cornerstone for future plans will undoubtedly be the ambitious scheme for the new Department of Industrial Design at the Royal College of Art, which is now in process of development. Quite rightly, this scheme puts industrial design training on a university level; but in doing so it acknowledges that basic training in the large art schools is an essential preliminary. And these will undoubtedly study the results which the Royal College of Art achieves, when they are formulating training methods of their own.

In an early number of DESIGN *we hope to publish an article by Robin Darwin, Principal of the Royal College of Art, describing the post-war reorganisation of the College and its plans for the future, with illustrations of RCA students' work.* EDITOR



Four different suggested treatments for a toothpaste tube and carton from the Leicester College of Art

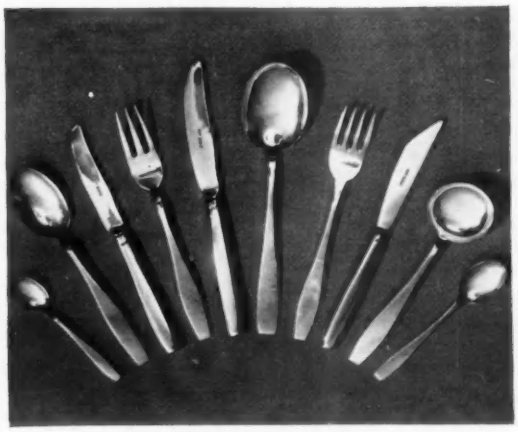
AMYAS
THAYER
AND COMPANY
ESTABLISHED 1905
TO OVERSEAS VISITORS
We are specialists in exporting valuable articles free of Purchase Tax to all countries
All goods are guaranteed genuine antiques

Students of Huddersfield Technical College School of Art designed this hand-lettered shop sign and rayon furnishing fabric; the former by Brian Roebuck, the latter (screen-printed in five colours) by John Colwill

The cut glass bowl and the teapot, above, were designed and made by students of Guildford School of Art and Crafts—and photographed in the School's photographic department

Pottery from Burslem School of Art. Left, plate with on-glaze decoration in rose pink and green by Doreen Longhurst; centre, cake plate, sugar bowl and cream jug in purple and grey by Beryl Sidley; right, plate with on-glaze decoration in grey and maroon by Beryl M. Wocd

Engraved nursery feeding set in silver designed and made by A. Millward, of the Birmingham College of Art and Crafts, during his first year as a student there



Cutlery designed and made by staff and students of the Leicester College of Art for Mitchells and Butlers Ltd, the Midland brewers

school with the practical experience of the assembly line and the drawing office. One major difficulty would be that the industries that can usefully employ industrial designers are so diverse, and so scattered, that they cannot co-operate as a body for the purpose. Something could be done by the engineering industries pressing for the inclusion of an aesthetic element in draughtsmen's training; but this could never be more than a small part of the answer. It would require action at a national level, *e.g.*, by the Federation of British Industries, to establish a wider system throughout the country. Such a process would, moreover, take too long; the circumstances are very different from those which affect the training of specialist designers for craft-based industries.

To summarise: we must choose between two courses. We can wait until the demand operates—*i.e.*, until industry one day finds itself short of designers, only to learn that the education authorities cannot produce them overnight. Alternatively, the education authorities can demonstrate, with the aid of those manufacturers who already use industrial designers as a matter of course, that their specialist knowledge is a valuable commercial asset. Clearly the second alternative is the course to follow. It could well be put into effect by establishing pilot schemes in a very limited number of centres where the most favourable conditions exist. There is need for considerable experiment, and certain art schools have already made commendable progress towards removing their greatest handicap—lack of facilities for combining art training with technical knowledge—generally by co-operating with technical colleges; the LCC Central School of Arts and Crafts, the Birmingham College of Arts and Crafts and the Leicester College of Art and Crafts have made particularly rewarding efforts. Without decrying the work being done elsewhere, it is suggested that efforts at this level might well be concentrated in those centres until more is known of the methods and equipment most appropriate to the purpose.

The cornerstone for future plans will undoubtedly be the ambitious scheme for the new Department of Industrial Design at the Royal College of Art, which is now in process of development. Quite rightly, this scheme puts industrial design training on a university level; but in doing so it acknowledges that basic training in the large art schools is an essential preliminary. And these will undoubtedly study the results which the Royal College of Art achieves, when they are formulating training methods of their own.

In an early number of DESIGN *we hope to publish an article by Robin Darwin, Principal of the Royal College of Art, describing the post-war reorganisation of the College and its plans for the future, with illustrations of RCA students' work.* EDITOR

Four different suggested treatments for a toothpaste tube and carton from the Leicester College of Art

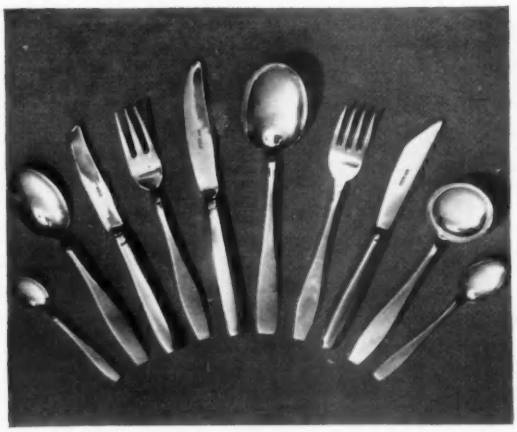
AMYAS
THAYER
AND COMPANY
ESTABLISHED 1905
TO OVERSEAS VISITORS
We are specialists in exporting valuable articles free of Purchase Tax to all countries
All goods are guaranteed genuine antiques

Students of Huddersfield Technical College School of Art designed this hand-lettered shop sign and rayon furnishing fabric; the former by Brian Roebuck, the latter (screen-printed in five colours) by John Colwill

The cut glass bowl and the teapot, above, were designed and made by students of Guildford School of Art and Crafts—and photographed in the School's photographic department

Pottery from Burslem School of Art. Left, plate with on-glaze decoration in rose pink and green by Doreen Longhurst; centre, cake plate, sugar bowl and cream jug in purple and grey by Beryl Sidley; right, plate with on-glaze decoration in grey and maroon by Beryl M. Wood

Engraved nursery feeding set in silver designed and made by A. Millward, of the Birmingham College of Art and Crafts, during his first year as a student there



Cutlery designed and made by staff and students of the Leicester College of Art for Mitchells and Butlers Ltd, the Midland brewers

Fresh ideas in foreign glass

ADVENTUROUSNESS IN DESIGN is evident in glassware from many countries. All but one of the examples shown here are in current production, and about half of them have been designed since the war. They make an interesting comparison with the British glass from the 1951 Stock List shown in DESIGN No 14, pp 18–19.

The illustrations in these two pages are a small selection from the Council of Industrial Design's growing file of photographs of well-designed foreign products—a file which is freely available for consultation by interested British manufacturers.

The Swedish examples—designed in England in 1936, though made in Sweden—have stood the test of time. These jugs are in rippled glass with ribbon handles. The Danish vases, designed since the war, are hand-made in full crystal, mostly with pinched-in sides; no two pieces are ever of exactly the same shape, nor is the glass of uniform thickness. Gunnel Nyman's glassware, first produced in 1947, shows her skill in the *mouche* technique. Her development of this technique started from a desire to experiment, not with surface ornament or form, but with the "inner hollow" which is part of the substance of the glass wall.

The Lobmeyr pieces were first made in 1934—the exquisite engraved plaque shown at the top of this page by the Czech branch of the firm, and the *mousselin* glass, below, by the Austrian. This is still in current production.

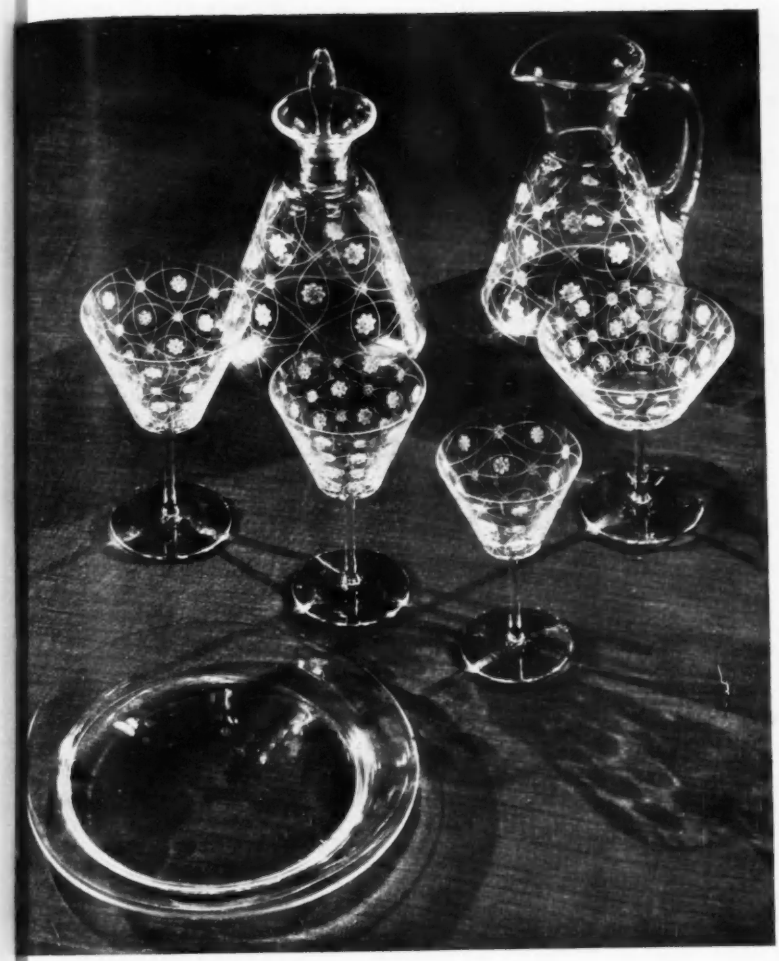
Of the French pieces, the *Eglantine* service was based on a drawing by Marc Lalique in 1948; the Baccarat vase was designed some years earlier—in 1937. After the rough vase comes from the mould, it is given its final shape by cutting, requiring many hours of hard work. The design of the mould itself involved much research; the vase weighs about 22 lb. and great care is needed to ensure that the cross-flutes do not cause the metal to be unevenly distributed.

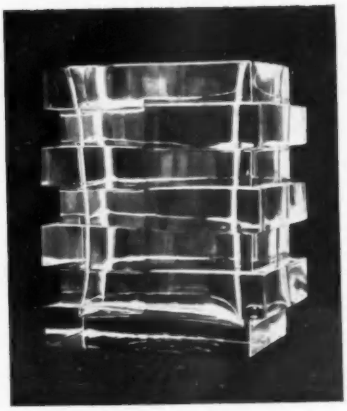
The cream jug and sugar bowl from America are from an exhibition of Steuben glass at present touring some of our West Country art galleries. H. L.

FINLAND: *designer, Gunnel Nyman; maker, Notsjö Glasbruk*

AUSTRIA: *designed by Ludwig Lobmeyr and made by the firm of Lobmeyr, Vienna*

CZECHOSLOVAKIA: *designed by Jirina Cermáková. Photograph by courtesy of* Tvar





FRANCE: *Above, vase by a staff designer of Baccarat.*
Left, Eglantine service by Lalique

ITALY: *designed for Venini of Murano*

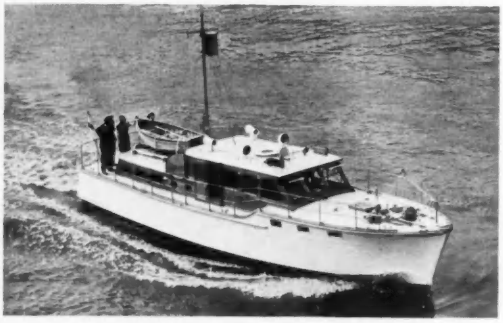
SWEDEN: *designed by H. J. Dunne-Cooke, of London, and made by Strömbergshyttan*

USA: *designed and made by Steuben Glass*

DENMARK: *designer, Per Lütken; manufacturer, Holmegaards Glasværk*

1: Gulvain, 24-*ton auxiliary Bermudan cutter*

2: Gunna, 22-*ton auxiliary Bermudan ketch*



4: Melisita, 21-*ton motor cruiser by Thornycroft*

5: *Vosper* Viking 46-*ton motor cruiser*

6: Merlin *class* 14-*foot racing dinghy by Jack Holt*

7: Sunrise, 14-*foot International dinghy*

DESIGN AFLOAT

Yachts and motor cruisers, upholding Britain's nautical prestige, from the 1951 Stock List

YACHT DESIGNING remains—as David Cobb has pointed out—a highly skilled art assisted by science, rather than a science assisted by art. It is as true today as in Nelson's time that sweet, flowing lines, whether they are conventional or the modern reverse sheer, produce a sea-kindly vessel.

In yacht building there is virtually no mass production. Most yachts are designed to suit their owners and the locality in which they will sail. Many today are of composite construction; light alloys are being increasingly used for hulls and masts.

1: *Gulvain* is one of the most modern yachts in this country—constructed entirely of light alloy. Her designer has adopted the reverse sheer line, already a feature of modern power craft, to overcome the difficulty of combining acceptable accommodation with the merits of light displacement. She recently competed in the New York to Bermuda race, a distance of 635 miles, and finished 9th on corrected time. Designed by Laurent Giles & Partners; built by Sussex Shipbuilding Co Ltd.

2: Designed by James McGruer, and built by McGruer & Co Ltd, at Clynder, *Gunna* is a powerful ketch, with a beam of 11ft. 6in. on a 35-foot waterline, giving good accommodation below decks for six people. Besides the usual internal fittings, she has a hot water boiler and a hot and cold shower.

Gunna has wheel steering, while her auxiliary engine is a 30 h.p. petrol/paraffin Morris *Commodore*. She made her maiden voyage to Norway.

3: The well-known ocean racer, *St Barbara* (illustrated on page 3), was specially designed by C. E. Nicholson, RDI, for the Royal Artillery Yacht Club, and races as a "mess" yacht, often with different crews. She is of composite construction with steel frames and beams; wood planking and decks; lead ballast keel; cabin-top, deck and internal fittings of mahogany. Her light-alloy mast is 25 per cent lighter than a similar spruce spar, and is the first to be fitted in an ocean racer. Built by Camper & Nicholsons Ltd.

4: *Melisita* is an ocean-going motor yacht for five or six people, designed and built by John I. Thornycroft & Co Ltd at Hampton-on-Thames. Her engines are twin Thornycroft 55 h.p. diesels which give her a cruising speed of 9½ knots. This vessel has done a lot of cruising off the west coast of Scotland. She is 45ft. long with a beam of 11ft., and draws 3ft. 6in.

5: The *Viking* class of motor cruisers was evolved by Vosper Ltd after the war from the motor torpedo boats which they had been building for the previous eight years, to give their boat-builders work on a similar type of craft.

They are round-bilged boats with raked stem and transom, constructed of double skin mahogany on oak timbers with decks of Oregon pine. The prototype was powered by twin Perkins diesel engines giving a speed of 15 knots; two Vosper V8 petrol engines can be fitted as an alternative if desired. Both types of engine are rubber-mounted and flexibly coupled to propeller shafts. These boats are designed to have good sea-keeping qualities; the accommodation is good and includes a spacious galley, while a full outboard view can be obtained when seated in the saloon.

6: The *Merlin* class 14ft. racing dinghy was originated when *Yachting World* commissioned Jack Holt to design a modern restricted type for racing round the coasts. She is decked-in with a small central cockpit, and for added safety and comfort has a high boom, rounded side decks, large buoyancy tanks and fitted bilge pump. The hull is clinker-built. *Merlins* have a small, easily handled, sail plan with a rotating mast, which gives maximum efficiency.

7: *Sunrise*, one of the large restricted class of "International 14's," designed by Uffa Fox and built by Fairey Marine Ltd, is of revolutionary construction. The shell is moulded in one piece of three laminations of African mahogany, bonded together with waterproof synthetic resin. This construction makes timbers and other internal stiffening unnecessary and has the great advantage of being proof against tropical conditions; the boat should be as tight as a bottle throughout her life. A sister boat to *Sunrise*, sailed by Charles Currey, has already won several international trophies.

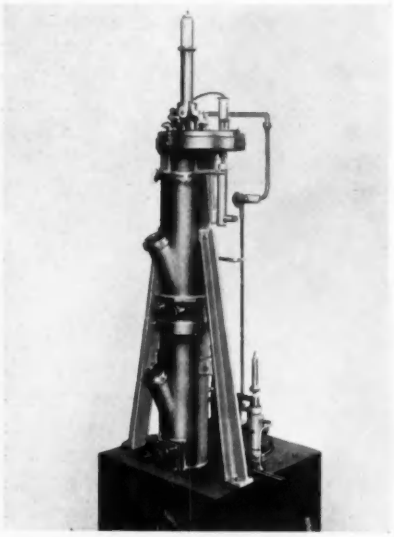
Photographs 1, 3, 5, 7 are by Beken, Cowes.

From laboratory to production line

In the evolution of the Metrovick electron microscope, improvements in convenience and appearance have gone hand-in-hand with the solution of technical problems

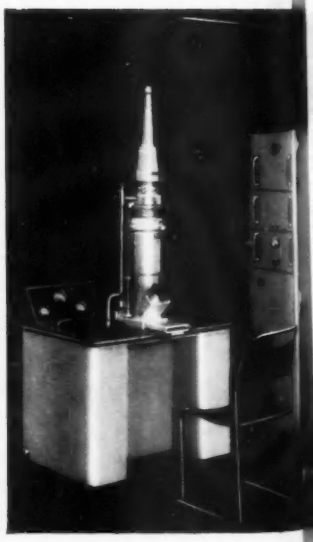
THE HISTORY of the electron microscope is so short that one might hardly expect to find today many changes from the earliest models. Yet several significant improvements have been made as will be seen from this description of the Metrovick series.

All electron microscopes are based fundamentally on their progenitor, the optical type, though the size of particle visible is now about a hundred times smaller. Instead of rays of light passing through a series of glass lenses we now have an electron beam controlled, as in a cathode ray tube, by a system of magnetic coils or electrostatic plates; in this country the former method is usual. The heart of the instrument is a long cylinder with the electron gun at one end, a fluorescent screen at the other and between the two a series of "lenses" and a holder for the specimen under examination. An image of the latter is thrown on to the screen after considerable magnification. Special techniques are employed where thin specimens cannot be used.



1936: *The heart of the original electron microscope, the EM1. Ancillary equipment required considerable space around the main apparatus*

1944: *The EM2 was commercially produced. It had a separate control desk*
Photo: courtesy Firth-Brown Research Laboratories



1948: *Further progress in design was seen in the EM3. It has a self-contained desk and many technical improvements*

The microscope is even further complicated by the need to remove most of the air molecules from the path of the electron stream; this necessitates high-vacuum pumping equipment and possibly air locks for isolating part of the system whilst specimens are changed. A high voltage direct-current supply is needed for the "gun" and this requires some stabilising device to steady it. Apart from these fundamental requirements factors such as freedom from vibration, and minimum backlash on adjustments, call for careful planning and extremely high mechanical precision in manufacture. The backlash on the adjustment for exploring the full area of the specimen is, for example, less than one hundred thousandth part of an inch.

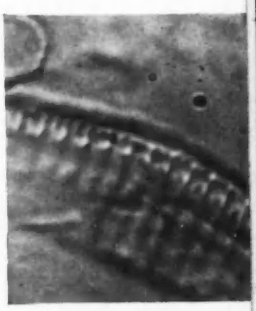
Technical problems such as these must be solved before attention can be paid to the final appearance and to the convenience of the user. These two aspects of design, however, are considered very carefully and though "function dictates form" it is no accident that the later models illustrated are of pleasing shape.

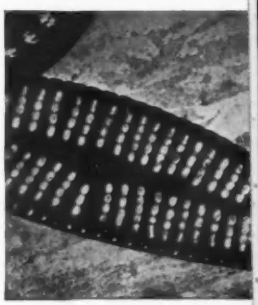
In 1936 the original EM1 was developed, like subsequent models, in the Trafford Park research department of Metropolitan-Vickers Electrical Co Ltd. It comprised a rather heterogeneous assembly of items and though it was not commercially produced it gave good service in the Imperial College of Science and later at the National Physical Laboratory. Subsequent development was held up owing to the war.

In 1944 the EM2 made its appearance. This was a

continued overleaf

1950: *This latest experimental model, the EM4, has a horizontal built-in "stack" and is extremely compact. The cabinet is made of one piece of bent sheet steel*





The improved results which can be obtained with an electron microscope are clearly seen in these micrographs. The upper picture shows diatoms as seen through an optical microscope; below, as they appear through an electron microscope at the same magnification

great improvement from the user's point of view and is still in use in many industrial and medical laboratories. It comprised a vertical stack containing a two-magnetic-lens image-forming system, a control desk, a DC set to provide 50 K V and a separate pumping set. This equipment had a magnification of from 500 to 15,000 times, its resolution being 100 Ångström units. Air locks were provided so that the specimen holder could be changed with only one minute's repumping; the original time for pumping, on starting up, was about 25 minutes.

Four years later the EM3 provided a distinct all-round improvement. A more powerful instrument, it operated at 100 K V with a resolution better than 50 Ångström units and gave a continuous range of magnification from 500 to 100,000 times. It was equally advanced in appearance; the stack containing a three-lens system was mounted directly over a neat desk with controls conveniently grouped for the left hand to operate, leaving a space on the right for writing. (A right-hand-drive model for left-handed writers was not produced.) Instruments were readily visible on a sloping panel at the back of the desk.

This Kemsley photograph of the EM3, the standard production model, was taken at the Institute of Electronics exhibition in Manchester in 1949

A separate DC set took the form of a vertical cubicle and the mechanical backing-pump was kept as a separate unit; for high resolution work it is necessary to reduce vibration to a minimum. Installation was simplified by enabling supplies to be connected to either the left or right hand side of the desk. Carrying handles were unnecessary since lifting rods could be inserted through holes in the recessed base and removed when the desk was in position. Easier access to all parts simplified maintenance routine. No air locks were necessary on this model owing to the speedy pumping after changing specimens.

At the Physical Society Exhibition in the Imperial College this year the experimental model of the EM4, a simplified form with limited performance, was first shown. With its horizontal built-in stack (if the word is still applicable) this model is extremely compact. Many visitors could hardly believe that this set was complete, but looked around for ancillary equipment such as pumps and supply units. The cabinet is made of one piece of bent sheet steel and has no inner angle-iron framework.

In performance the EM4 corresponds, approximately, to the EM2 in that it operates at 50 K V with a resolution of 100 Ångström units and a continuous range of magnification from 500 to 15,000 times. It is intended primarily for routine examinations rather than for original research work and is arranged to hold three specimens, each being selected in turn. After the insertion of a new specimen holder it requires only 10 seconds to regain a working vacuum; this is made possible by a special air lock. Pumping out from starting up totals about 10 minutes.

For carrying, rods are inserted through the bushed holes visible in the front of the instrument; lifting height is now more convenient.

Good design, with improvements already planned for later models, has in this case produced the most compact electron microscope on the market and it will probably be available at a price within the reach of a much wider field of users than previously.

The design and development work was carried out by Metrovick personnel and provides a notable example of what good teamwork between scientists and production engineers can achieve. R.M.K.

equally
a three-
at desk
hand to
g. (A
ers was
ble on a

cubicle
a separ-
y to re-
simpli-
ther the
handles
nserted
d when
ll parts
ks were
umping

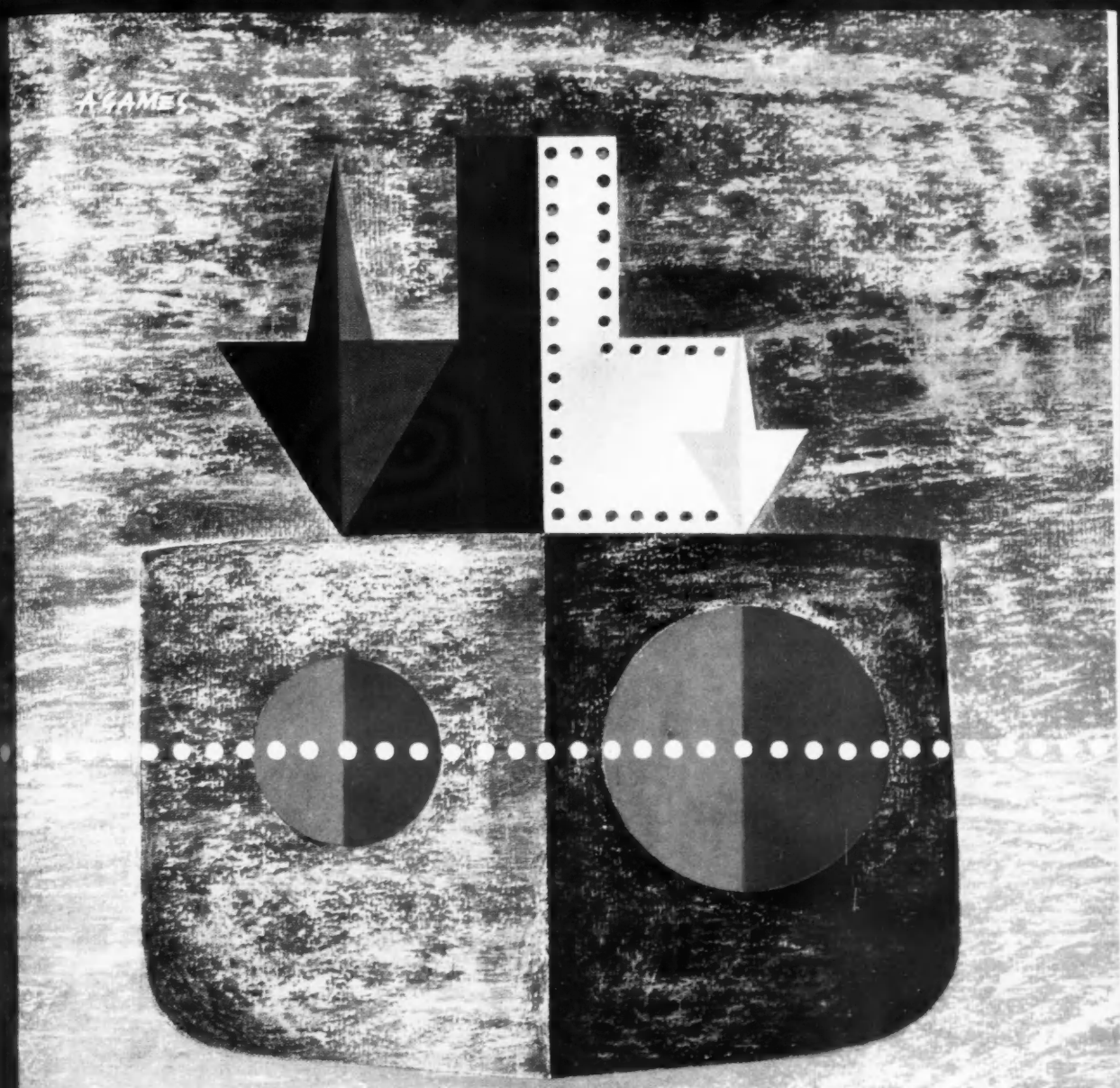
mperial
e EM4,
was first
he word
ompact.
set was
ipment
is made
r angle-

pproxi-
v with a
ntinuous
nes. It
s rather
l to hold
. After
ires only
is made
m start-

bushed
; lifting

planned
he most
nd it will
each of a

rried out
notable
scientists
R.M.K.



The simplest, but not always the most striking benefit which can be obtained from using an aluminium alloy superstructure is an increase in deadweight for the same draught and dimensions.

SALISBURY HOUSE LONDON EC2

b a

Ericsson Telephones Ltd., of London and Beeston, Notts, make this good-looking telephone for export. It is moulded from Beetle Melamine moulding powder, chosen for colour, appearance, good electrical properties and ability to withstand variable climatic conditions.

Mouldings made from Beetle Melamine moulding powder have high dielectric strength, good insulating and high non-tracking properties. They will withstand variable climatic conditions and are suitable for export to hot, damp climates. Translucent, semi-translucent and opaque mouldings of beautiful finish can be made from Beetle Melamine in a wide range of colours ranging from pure primaries to the most delicate pastel shades.

If you have an export moulding problem, consider Beetle Melamine. To ensure the best results, call in our Technical Service representative or designer who will freely co-operate with your own technicians and give the fullest assistance on problems of mould design, choice of material and moulding technique.

Write for Technical Leaflet M.P.1.

Beetle Standard Moulding Powders conform to B.S. 1322.

BEETLE MELAMINE

AMINOPLASTIC MOULDING POWDERS

B·I·P GROUP

Distributed by **THE BEETLE PRODUCTS CO. LTD.** *1 Argyll Street, London, W.1.*

'BEETLE' is a trade mark registered in Great Britain and in most countries of the world.

Changes in German taste

THE DESIGN STANDARD of any country at a given time resembles a three-tiered cake. The largest drum represents the popular, commercial taste of those who like what they know, the middle drum represents the more educated taste of those who know what they like and the topmost and smallest cake the experimental ideas of the *avant-garde* who know what they like so long as it is like nothing that they know.

In the normal order of things there is a constant traffic in ideas from the top downwards. The eccentricities of the intellectuals in one generation have a way of becoming the accepted standard for the discriminating in the next and the run of the mill in the third.

In spite of the interruption of the Hitler period this natural progression can be seen quite clearly in the story of German furniture design. In the late 1920's the ideas of the Bauhaus shocked German bourgeois taste; Hitler branded and banned them as "Bolshevik art." Yet in the late 1940's these same ideas, though tamed and modified, reappeared as acceptable standards in the homes of the professional classes, and today the pressure of crowded living in shattered cities is hastening acceptance in the mass market of these simpler, more compact forms. Though German furniture stores are still full of outsize, over-blown pieces both manufacturers and retailers are beginning to ask themselves who can afford not only the price but the space for these florid and vulgar beds and chests.

A good indication of the way taste is changing comes from the efficient, mechanised factory of Erwin Behr at Wendlingen in Würtemberg. Though this firm is still making traditional pieces, it is insuring against the future with a range of unit furniture, elegant and decent in appearance, sound in construction and excellent in finish. Some groupings of these units are shown on this page. At the same time smaller firms, such as Eugen Buschle of Stuttgart, which rely mainly on handwork, are well set in the new tradition of modest furniture, with sales appeal based on choice of woods, good proportion and attention to finish and details. P. R.

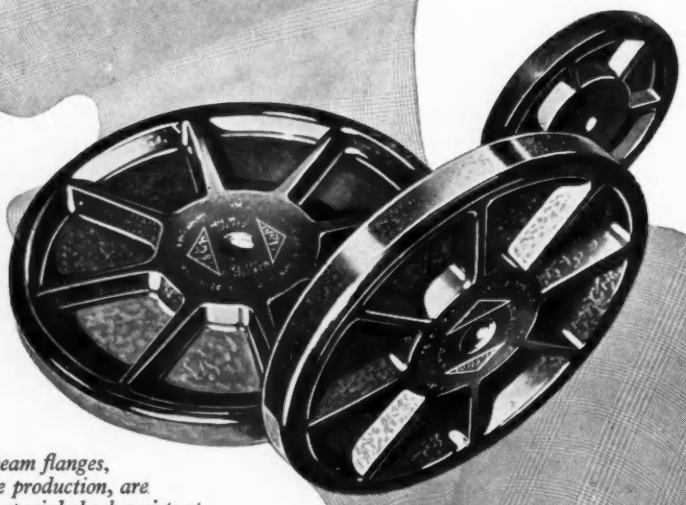
Erwin Behr cupboard built of three separate units, with oak-veneered flush doors inlaid with vertical lines of fruit wood

Exhibition room by Eugen Buschle of Stuttgart showing the new type of furniture being made by some South German firms

Desk-cum-bookshelf unit by Erwin Behr. The cupboard hinges and the drawer knobs are made of oak to match the frames

The Erwin Behr units, designed by architect Arno Lambrecht, are useful, versatile and acceptable for small present-day living rooms. The chairs with curved wooden arms and loose cushions are in a popular tradition of German chairmaking

British Industry uses Mouldings



These warp beam flanges, used in textile production, are moulded in a special shock resistant grade of BAKELITE material.

—in BAKELITE Material to be sure

Textile manufacturers know how to profit by the serviceable qualities of BAKELITE Plastics—do you? Take these strong warp beam flanges, for example; they can be dropped on a concrete floor without being damaged. Intricate shapes present no difficulty, either, with mouldings. Simple or complex, they can be turned out to fine limits quicker and cheaper. BAKELITE materials can satisfy industry's most exacting demands—for production components or finished products. Why not go into the details with the help of the BAKELITE Technical Staff?

TREFOIL

BAKELITE PLASTICS

REGD. TRADE MARKS

G80

Ring Sloane 9911 (LONDON), *Midland 5911* (BIRMINGHAM), *Central 4908* (MANCHESTER), *City 6825* (GLASGOW), *or write to:*

BAKELITE LIMITED · 18 GROSVENOR GARDENS · LONDON · SWI

Design and the photographer

SIR: It was with great interest that I read your article "Good products deserve good photography," in the June issue of DESIGN (No 18).

No one, of course, can quarrel with the article in principle, the low state of product photography is too evident to allow any doubt on that score, but can all the blame be laid at the door of the manufacturer? The conditions prevalent in the photographic field are surely a direct responsibility of the photographer, by whose skill the solution of this problem must come.

Let us face it—only a minority of photographers nowadays can produce work that can face reduction and reproduction without the need for retouching in varying degrees, and that minority, by the nature of things, demand a fee that only the more ambitious projects can carry. Where does that place the manufacturer faced with producing a catalogue requiring some hundred or more photographs within an appropriation already strained by high production costs generally? He must fall back on the second best (or even lower), who by and large have no great knowledge of the needs and limitations of reproduction processes, and retouching in smaller or greater degree becomes a necessary evil. I hold no brief for the extreme examples illustrated in the article (the retouching costs must have made some of them expensive failures), but until the run of "commercial" photographers thoroughly understand the peculiarities of the half-tone screen, the standard is not likely to improve.

F. CURZON
Assistant Advertising Manager
London E4 *Halex Ltd*

Motor industry: mixed bag

SIR: You say that the motor industry sets an example to other British industries in the quality of its publicity photography (No 18, p 6). This is true of the "big six," and the specialist car manufacturers and luxury coachbuilders also commission photographers who take great pains with their work. In contrast, most of the commercial vehicle manufacturers and commercial motor body builders habitually send out inferior photographs.

Some employ portrait photographers, others call upon the bash-bash merchant from the local press, and some have their own staff man, who gets away with murder. There seems to be no one in these firms who knows whether a photograph is good, bad or indifferent, and most sales managers and publicity superintendents seem childishly pleased with negatives which would never be printed in a news-photo agency.

The "laying on" of the vehicle is too often left to a production executive who treats the proceedings with undisguised contempt. He chooses a dull day, a dirty vehicle, an untidy background, tells the photographer what to take, how to take it, and to be quick about it, too. Nine times out of 10 the result is horrible, and goes straight into the bucket when it reaches me.

London WC2 PATIENT EDITOR

Cheap, cheap

SIR: I have read with interest the article "Good Products Deserve Good Photography" in DESIGN (No 18).

As a photographer I share all the horror of the retoucher's knife and airbrush, and fully endorse your views, but the eternal cry of "Cheap, cheap, cheap" is also a major reason for the average poor-quality photography being produced today.

With so many multiple uses to which good photographs of good products can be put, it is senseless to limit the photographer by price. A simple study of a pack or article, well lit and imaginatively placed in relation to a background of dovetailed tones, can take as much time as a complicated set. This is not generally appreciated by the client. In despair and sometimes, one feels, in defiance the photographer lapses into mediocrity.

Admittedly the heavily retouched print can mask a multitude of photo-graphic sins, but often the client demands retouching to excess—nothing pleases him more in the industrial coverage of his works than airbrush-sprayed floors, mute stationary workmen, and gleaming machinery—this deep-rooted mania, a heritage from the earliest days of photography, is observed almost fanatically in object photography, as in every branch of our profession. So much so that in selling high-grade photography one has to break this prejudice even before contemplating the commission.

The most successful studies are those that combine good photographic technique, plus *print quality*, with the minimum of sane retouching, offset by backgrounds which discreetly garnish, but do not detract from, the main objective of the photograph.

The real danger of excessive retouching is obvious enough. It will irritate and deter the potential overseas and home buyers, whilst adding no credit to the photographic profession, whose main sales theme always should be accuracy of representation. The photographic medium is well suited to detailed, factual recording; let us use it with intelligence.

KENNETH R. COLE
Managing Director
London W1 *Scope Photographs Ltd*

The retouching bogey

SIR: Your article and illustrations on "Good products deserve good photography" (No 18, p 4) should have the very serious attention of manufacturers.

Why is the general standard of product photography so low? I think it is to great extent due to the fact that one is so often asked to get down to a price instead of up to a standard.

It seems to be forgotten that every product to be photographed has its own character and texture. It should be the photographer's job to treat each article on its merits. That cannot be done solely on the basis of cheapness. A photograph that fails to depict the object truthfully and to the best advantage is a waste of money whatever the price may be. Appropriate lighting and suitable background must be *thought* out for each individual shot if pictorial information is to be presented attractively and in a way that will create a desire for the goods.

Any sales manager will agree that a really good photograph is a very great help in sales promotion. A bad one is just as great a hindrance and if fraudulent can become a real embarrassment. This applies particularly to the heavy and unnecessary retouching so often used that covers completely the original photograph and leaves one wondering what the product really looks like. I have yet to come across the surface or texture that cannot be adequately photographed in a pleasing manner without the aid of excessive retouching.

RICHARD SHARPE
London SW10 *Richard Sharpe Studios Ltd*

The hub of production is the drawing office

Not many years ago the drawing office was generally considered a necessary evil, and was housed in unsuitable rooms grudgingly maintained and scantily equipped.

Today, however, it is realised that the output of the works is dependent on the output of the drawing office, and that the draughtsmen deserve to be equipped to enable them to work with maximum efficiency.

For over 50 years we have specialised in the design and manufacture of drawing office equipment and materials of all types, and have contributed towards the better conditions and improved methods of the modern drawing office.

Hall Harding Ltd · STOURTON HOUSE · DACRE ST · LONDON SW1

Tel. WHitehall 5302

Branches at

BATH BELFAST BIRMINGHAM BRIGHTON GLASGOW LONDON MANCHESTER NEWCASTLE-UPON-TYNE NEWPORT, MON.

NEW PIECES by the STORY DESIGN GROUP

This Bureau—specially designed to supplement the STORY HEPPLE RANGE OF FURNITURE—is obtainable in Australian Walnut or Queensland Maple. Size 2′ 9″ x 1′ 6″ x 3′ 9″ high £21 6 9

(A sliding mirror can be fitted rendering it a dual purpose Bureau Dressing Table if desired.)

Chair in Oak, with Sycamore slats and stuffed hair seat £4 0 0

Both these pieces are within the Utility Range and are free of P.T.

★ ★ ★ ★

The SAFARI CHAIR, shown below in Yugoslavian Beech, has a unique folding action but remains steady when opened to its fixed position. Size of table 3′ x 1′ 8½″ x 1′ 5″ high

These can be quoted in alternative timbers and the chair in a variety of leathers and coloured webbings.

Chair £14 10 0. Table £14 including Purchase Tax

We will be glad to quote from architects' details or quote and submit designs to suit special requirements. Complete contracts handled, including the supply and laying of carpets and linoleum and the making and hanging of curtains.

STORY'S of Kensington

STORY & CO. LTD. (Contracts Dept.), 7 Kensington High Street, London, W.8. Telephone : WEStern 0825.

Industrial Design Abstracts

Britain's leadership in exhibition design [A]

Before the war the Scandinavian countries led in exhibition architecture, and only Switzerland or Italy attempted to rival them. Just before the war, with the MARS Group exhibition of January 1938, British designers started to develop this art, and during the war these tentative beginnings blossomed into a school of exhibition design that now probably cannot be rivalled. The first peacetime use of war display-techniques was at the "Britain can make it" exhibition, but despite the huge success, it was found that the methods employed to display propaganda needed modification for the display of commercial products. Today, exhibition design has become a recognised branch of modern architecture. Special credit for this development is given to Misha Black, Basil Spence and James Gardner. The South Bank exhibition will provide the opportunity for Britain to demonstrate her leadership in this field.

The Times Review of Industry, July 1950

Loewy and the rest [A]

A heated argument between Raymond Loewy, on the one hand, the rest of the platform and the audience on the other, developed in a symposium sponsored by the Museum of Modern Art on "The Aesthetics of Car Design" and reported by George Nelson. The main argument took the line that honesty and grace were desirable ingredients in car design, and that US cars were conspicuously lacking in either; Loewy's contention was that European cars also lacked them. The MG and the Cisitalia were among the foreign cars most discussed. Loewy brought in heavy artillery in the shape of cartoons of non-American cars (reproduced in *Interiors*, pp 112–19) arguing that these cars were mainly two-seater sports cars, an easier problem than the US family car. Nelson suspected the interest shown by the public in European designs may express growing impatience with the American. Darrin, design consultant to Kaiser-Frazer, thought US procedure suffered a major defect in the divorce of styling and engineering. Nelson noted that the interest in automobiles is a great common denominator in American society, to be matched only by baseball, at which every American regards himself as an expert.

Interiors, June 1950

This dovetail saw owes its form to the development of a two-handed grip, combining the saw handle with the plane handle. The same quality is evident in many traditional Danish craft tools. Other examples are described by the Copenhagen City Architect in the Danish Foreign Office Journal, *No* 1, 1950

Railway aesthetics [A]

After an analysis of architectural styles in railway termini, C. Hamilton Ellis discusses the aesthetics of the railway and of the train itself. He notes two distinct aesthetic traditions, one English with a strong road tradition behind it, and the other American, which has imitated nothing. Ross Winans was mainly responsible for the original development in America of railway carriages leading to "that truly beautiful thing, the clerestoried Pullman car."

The British forms became so rigidly conventional that engineers with little aesthetic sense could still produce beautiful and gracious locomotives. This is contrasted with the development in Eastern Europe of sheer needless ugliness. The only English designer to attempt to break away from the Victorian tradition is O. V. S. Bulleid. The efforts of British Railways are heroic and carry on the grandeur of an earlier tradition, but France's war-wrecked system is already advancing beyond our own.

Editorial comment on this article deals with the wider problem of design throughout a national transport system.

Modern Transport, 24 June 1950. (*The Railway Gazette*, 23 June, quoting the French journal *Travaux*, reports on the efforts being made by French railway engineers to harmonise railway works with the surroundings)

FURNITURE: *L'Architecture d'Aujour d'hui*, Boulogne, May 1950, devotes the major part of its May issue to **the work of Aalto,** primarily in architecture, but including furniture. *Décor d'Aujour d'hui*, No 56, also notes his growing influence.

Furniture and efficiency. A review of the first annual report of the Furniture Development Council, in which the implications of design in relation to economy are considered. *The Economist*, 10 June 1950

Prize designs for modern furniture, by Edgar Kaufmann, Junior. Book: 78 pp, 10 × 7½in. A full account of the international competition for low-cost furniture design (DESIGN No 17, p 24).

GENERAL: **Industrial design: thirty years' progress,** by Sir Charles Tennyson, CMG, who says: "There has been immense improvement in some directions; very little in others . . . There is a forward movement which will spread." *FBI Review*, July 1950

MACHINE TOOLS: **Built-in electrical equipment for machine tools,** by F. Geoffrey Marshall. Improvements in the reliability of the modern machine-tool electric motor have led to its incorporation within the body, which is advocated on the score of improved appearance. *Machinery Lloyd*, 24 June 1950

MARKETING: **'On the front' selling of oil.** Illustrated review (2 pp) of display units and packs used for Mobiloil and Energol motor oil. Standardised colours are used for Energol oil-cans, bottles, drums, delivery vehicles, printed matter, etc. *Advertising & Marketing Review*, July 1950

PACKAGING: **Warenpackungen aus Danemark,** by Erik Stockmarr. Illustrated description of the packaging policy of the FDB (the Wholesale Buyers' Association for the Danish Co-operative Societies). *Gebrauchsgraphik*, Munich, No 5, 1950

PUBLIC LIGHTING: **Three Cantor lectures on public lighting,** by J. M. Waldram. A comparison of developments in this country and abroad, with a note on the unsolved problems. *Journal of the Royal Society of Arts*, 16 June 1950

TEXTILES: **Lucchese silks,** by Florence Edler de Roover. Historical account of the Lucchese silk industry, containing an interesting section on its contributions to textile design. *Ciba Review*, Basle, June 1950

YACHTS: **Designing Competition.** Prize-winning plans and designer's report, with judges' comments on the competition for a small yacht of minimum cost, organised by the *Yachting World*, July 1950

... now assembled in Great Britain

THE WORLD'S *Foremost* ACCOUNTING MACHINE

FOREMOST in adaptability. Quick-changing from one bookkeeping job to another . . . simultaneous production of two, three or more related records.

FOREMOST in systems analysis. A machine which complements any accounting system that we can design for you . . . faster and more efficient posting. Multiple balances.

FOREMOST in operator appeal. Electrical control . . . . . Simple keyboard with new finger-grooved keys . . . . . Automatic printing of all balances.

MODEL 686

Remington Rand

★ *Please write for more detailed information.*

REMINGTON RAND LIMITED (Dept. AM93), 1 NEW OXFORD STREET, LONDON, W.C.1. Telephone: CHAncery 8888

Strong...

Pressure proofed by patented process and tested at every stage. Only proven leads go into Venus Drawing Pencils

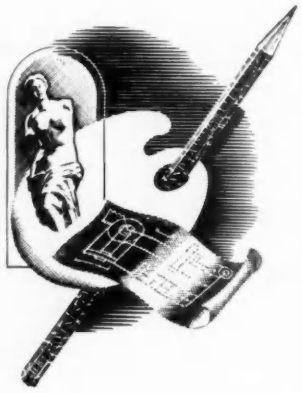
SMOOTH...

A patented colloidal process removes all grit and impurities—they must be smooth

ACCURATE...

Accurate through and through—graded and tested by experts, Venus Drawing Pencils make the right mark every time

THE PENCIL WITH THE CRACKLE FINISH



VENUS *Perfect* **PENCILS**

THE VENUS PENCIL CO., LIMITED, LOWER CLAPTON ROAD, LONDON, E.5

NOTEBOOK

Selling to North America

"THERE IS NO factor more important in the selling of British goods in North America than design."

The quotation is from a speech by Sir Cecil H. Weir, Chairman of the Dollar Exports Board, at the Convocation of the Royal College of Art on 13 July. To students of the College he said: "There is no business effort in which you have a bigger part to play than in this dollar export drive. I do not mean to imply that design and styling are not vital factors in every market, abroad and at home, [but] failure to give these factors their full weight in our approach to the North American markets would render hopeless the struggle for a place in these markets. . . .

"Slavish imitation of United States or Canadian products is neither necessary nor desirable. If your product is good in itself, then it is often an asset for it to have a distinctive character."

Scottish furniture in Chicago

Unlike the British exhibit at the Milan Fair (on which Wyndham Goodden commented in DESIGN last month) Britain's official information stand at this month's Chicago International Trade Fair is creditable to this country. The Commercial Relations and Exports Department of the Board of Trade are responsible for the stand, and Dennis Lennon, director of the Rayon Design Centre, selected for it contemporary furniture by Scottish Furniture Manufacturers Ltd, wallpapers and soft furnishings.

"Designers' Choice"

A new event at Lewis's Birmingham store is the selection of a well-designed article by a committee of the Midland Industrial Designers' Association for display for two weeks in the department from which it is chosen. The object is displayed on a transportable stand designed by Leslie J. Harwood, and the reasons for the choice are indicated. All articles chosen will be in the 1951 Stock List.

Jewellery Centre changes

Changes have taken place in the structure of the Design and Research Centre for the Gold, Silver and Jewellery Industries. The financial support formerly received from the trade associations is now provided by the Jewellery and Silverware Council.

Changes in staff have also been made: A. Selwyn has been appointed Director of Information and Secretary to the Centre, and Stanley Wright, formerly Principal of the Falmouth School of Art, has been appointed Director of Design, taking up his duties on 1 August. Dr G. E. Gardam continues as Director of Research.

For your diary

The Council of Industrial Design's leather and fancy goods exhibition, to be held in the Murray House exhibition hall, opens for four weeks on 5 September, not as previously announced.

The Industrial Finishes Exhibition at Earl's Court will open on 30 August.

A discussion meeting on "Design policy in home furnishing industries," organised by the Federation of British Industries and the Council of Industrial Design, will be held at 5 p.m. on 12 September at 21 Tothill Street, London SW1.

Publications

With commendable enterprise, the Bowater Paper Corporation commissioned a number of wallpaper designs as illustrations for their lavish new magazine about paper and its uses, *The Bowater Papers*—to be produced approximately twice a year. The designs, by Sylvia Priestley, Lucienne Day, Jacqueline Groag, and Diana Armfield and Roy Passano, are reproduced as a folding plate in the first issue. The standard of layout and illustration of the magazine is extremely high.

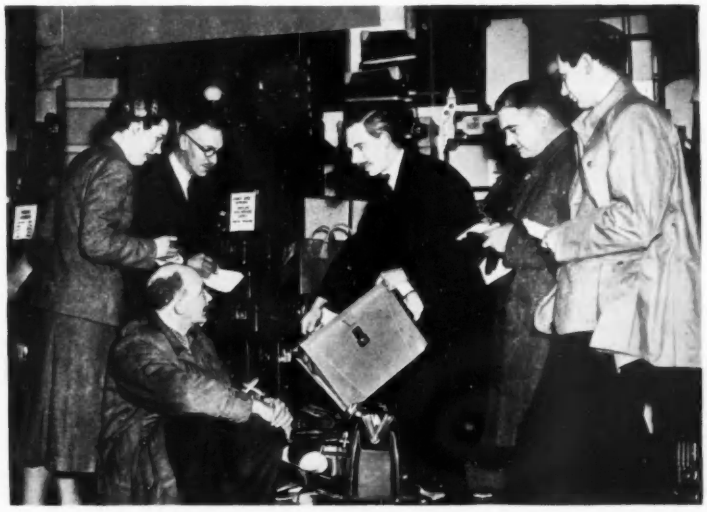
Another lavish publication is *Survey of the British Furnishing Industry* (National Trade Press, £2). It is intended as a guide for buyers, traders and importers and contains nearly 500 illustrations—some of them in colour—of furniture, textiles and other products of the home furnishing industries.

RCA magazine

First issue of *ARK*, the students' magazine of the Royal College of Art, is due to be published in October and will have book illustration as its theme. Future issues of the magazine, which is to be published three times a year, at 2*s* 6*d*, will deal with domestic art and political art.

Empire timbers on show

Many people criticise present-day furniture on the grounds that, in the absence of applied ornament, one piece looks much like any other piece. It is to be hoped that these critics visited Heal's recent exhibition of contemporary furniture made from British Empire timbers; for there they would have seen how different a standard fireside table, for example, can look when it is made in different woods. Moreover, they would have realised that had each table been



Members of the Midland Industrial Designers' Association choosing the first article for special display in Lewis's Birmingham store. Left to right: Miss I. M. Stevens; P. Gladman; J. Barnes (seated); L. J. Harwood; S. Coleman; R. Brookes

decorated with machined ornamentation the distinctive pattern of the wood would have been lost. Heal and Son Ltd and David Joel Ltd, who were largely responsible for the exhibition, are to be congratulated on such an interesting show.

Plastics progress

Only by adequate research and testing before production will plastics be able to maintain and develop their place as individual materials, and not as an imitation or substitute for others. This point was emphasised in a speech by G. Dring, research and development manager of Bakelite Ltd, during a press visit to the company's new laboratories at Tyseley, Birmingham.

Answering your enquiries

We are sometimes asked to publish in DESIGN the full names and addresses of every firm mentioned in our news pages. Space is too limited to make this practicable (even if it were altogether desirable); but we are always willing to pass on the information to any reader who is interested—or to forward correspondence, addressed c/o DESIGN, to British manufacturers and designers mentioned in our pages.

ADVERTISEMENTS

MANUFACTURERS REQUIRING THE SERVICES OF DESIGNERS, *whether for staff positions or in a consultant capacity, are invited to apply to the Design Advice Section, Council of Industrial Design, Tilbury House, Petty France, London SW1, for a short list of designers suitable to their particular purposes, which should be explained in some detail. This service is gratis and incurs no obligation.*

SUCCESSFUL SELLING OVERSEAS Effective photography can present your product, or other information that lends itself to photographic treatment, in a way that creates enquiries and starts sales. WREN STUDIOS LTD specialise in monochrome or colour; ring Waterloo 6455, Exten. 20, or write 47 Hopton Street, London SE1.

For COMMERCIAL PHOTOGRAPHY and the supply of quality prints and enlargements consult the Manor Studio, 57 The Green, Southall, Middx. 'Phone SOU. 2967.

PICTURE FRAMES AVAILABLE IN ALL SIZES. Special designs and finishes made to order. The Rowley Gallery, Kensington. Park 4349.

CREATIVE AND RECORD PHOTOGRAPHY
Studio and Location
RICHARD SHARPE STUDIOS
11 Gunter Grove, London, SW10
FLAXMAN 1822

BRITISH COLOUR COUNCIL. Conference Room, maximum seating 70, available for meetings and lectures. Also Exhibition Room 1000 sq. ft. and foyer. Apply Secretary, 13 Portman Square W1, Welbeck 4185.

THE APPOINTMENTS BUREAU OF THE LONDON COLLEGE OF SECRETARIES welcomes enquiries from Professional Men, Directors and Higher Executives who have vacancies for secretaries with a University standard of training. For interview by Employers, students are selected from among those who have completed their Course with the full London College Diploma. In accordance with our established custom, no fees are charged for this service. Please write or telephone to :

The Appointments Director
THE LONDON COLLEGE OF SECRETARIES
170 Queen's Gate, London SW7
KENsington 3228

Do your business associates see DESIGN regularly ?

Complementing the established trade and technical journals, DESIGN keeps the progressive manufacturer in touch with developments in other industries as well as his own. Due for publication in the next few months are articles on Nameplates for Machines and Metalwares . . . Industrial Design and Local Patriotism . . . Evolution—not Revolution—in Furniture . . . The Reorganisation of the Royal College of Art . . . The English Tradition in Pottery Design . . . Craftsmanship and Industry in Scandinavia.

2*s* a copy from your newsagent or 25*s* a year post free from DESIGN Subscription Department, HMSO, PO Box 569, London SE1

CLELAND PACKAGING

. . . and these qualities are essential in the protection and selling of your product. Be it a small carton to carry a light article or a large display outer to contain dozens, sound planning and careful production will ensure presentation in the best traditions of Industrial Design functionally and visually.

William W. CLELAND Limited
PRINTERS AND BOXMAKERS
STAPLE HOUSE, CHANCERY LANE, LONDON, W.C.2
Phone: Holborn 2521
AND CULLINGTREE FACTORY, BELFAST

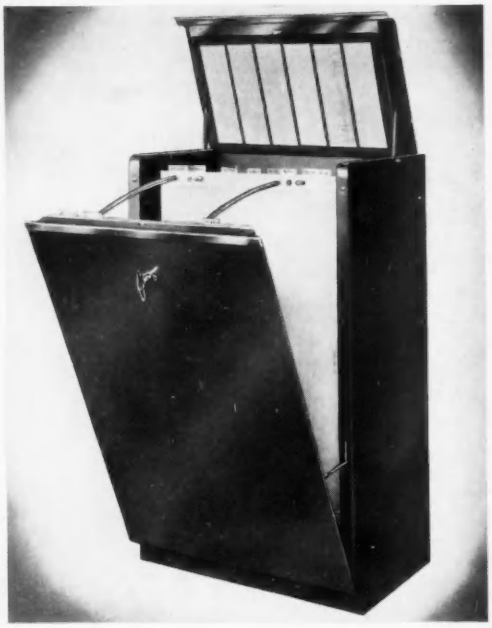
THE ACID TEST

Sulphuric acid is so widely used in Industry that it is commonly taken as an index to the state of trade. The acid is used as it is produced and therefore the chart of its consumption reflects the fluctuations of business quickly and closely. Acids, with their opposites, the alkalis, are both in volume and range of uses the most important direct contribution of the chemical industry to Production. There is scarcely a commodity, scarcely even a single article which can be made without either acids or alkalis entering at one or more stages of its manufacture. Sulphuric acid is used in almost every industry. The modern method of producing the acid from iron pyrites, air and water was suggested in 1831 by Peregrine Phillips, a Bristol vinegar brewer. The other essential " heavy acids " are nitric and hydrochloric. Tens of thousands of tons of nitric acid, once known as " aqua fortis " or " strong water ", are produced by the British chemical industry every year. It forms the basis of nearly all explosives, as well as of the inorganic fertilizers which are today required in increasing quantities to grow more food. Hydrochloric acid, or spirit of salt, is a combination of hydrogen with chlorine and finds wide uses in the metal pickling, tanning and textile trades. The heavy acids are in one sense the manufactured products of the chemical industry. In the much wider sense they are essential raw materials without constant and adequate supplies of which the wheels of production would stop turning. The British chemical industry is the largest manufacturer of heavy acids in the world.

ICI

IMPERIAL CHEMICAL INDUSTRIES LIMITED

PR3



Designs for Industry

THE MASON DRAFTING STAND

Almost every branch of industry is dependent on equipment suitable for helping to produce ideas and designs with which to keep in step with the pace of current demands. An appreciable boost to efficiency could be gained in many drawing offices by the use of more up-to-date equipment. When seriously considered, it is no more than fair to provide the designer with apparatus that can readily assist him in the development of ideas.

The Drafting Stand illustrated above is based on the principle of counterbalance, and allows the draughtsman to obtain any board position from horizontal to vertical, with speed and ease. The method of operation is simple. Firm pressure on the back foot pedal bar unlocks the assembly and the board is adjusted into any position desired by lightly using the hand grips provided at the base of the board cradle. The assembly is then locked by depressing the front foot pedal bar. Double Elephant, Antiquarian or Hamburg drawing boards may be used, fitted with a standard drafting machine or a parallel-movement straightedge. Whichever is preferred, a suitable counterweight is fitted to ensure accurate balance with finger-tip control.

The Mason Drafting Stand is of streamlined construction with all locking and movement control mechanism completely enclosed. No effort has been spared in producing a stand unprecedented in its excellent design and operational perfection for providing every possible board position likely to be required by any draughtsman or designer.

Full details of this equipment are available from the DRAWING OFFICE SERVICE DIVISION.

THE "ARCLIGHT" VERTICAL PLAN FILING CABINET

Illustrated above is another new idea developed in the form of a super-efficient filing system. In many business organisations, plans and drawings represent thousands of pounds in terms of time and cost of production quite apart from their inestimable value as key drawings. It is, therefore, no less than essential that such plans and drawings should receive adequate protection.

The principle of suspension is used in the "Arclight" Vertical Plan Filing Cabinet. Each plan is attached to an individual holder and suspended separately. Each holder is manufactured from stout rag parchment of double thickness, with the lower edge open to a depth of half an inch. The "lips" thus formed are pre-treated with a special solution, which, when moistened, firmly grips the edge of the inserted plan. Thereafter, the plan may be removed from the cabinet, referred to or put through a photo copier and returned to its place, the holder only having been handled. When filed, plans are suspended neatly by means of two pairs of plated curves fitted to the front and rear panels of the cabinet.

A half turn of the cabinet handle automatically releases the lid which contains a visible strip index to indicate the exact position of each plan. By completely turning the handle, the front panel opens to a controlled distance, disengages the parabolic curves and allows the required plan to be removed or filed in a second. Approximately 600 plans may be contained in one cabinet.

For complete details of this excellent system please apply to the BUSINESS EQUIPMENT DIVISION.

E. N. MASON & SONS, LIMITED, ARCLIGHT WORKS, COLCHESTER

PHONE: 2266

And at LONDON · GLASGOW · MANCHESTER · BRISTOL

DESIGN is published for the Council of Industrial Design, Tilbury House, Petty France, London SW1 (Scottish Committee: 95 Bothwell Street, Glasgow C2) by His Majesty's Stationery Office, and printed in Great Britain by Benham and Company Limited, Colchester.

K36 S.O. Code No. 88-1266-20-50.*

BINET
e form
ganisa-
nds in
n their
no less
receive

light "
to an
lder is
ckness,
. The
lution,
serted
abinet,
d to its
n filed,
plated
et.
ses the
e exact
lle, the
es the
moved
be con-

e apply

TER

T O L

Street,